

Beneficial Insects I

UNL Department of Entomology
Robert J. Wright, Terry A. DeVries, and Jim A. Kalisch



1. Minute Pirate Bug



2. Damsel Bug



3. Green Lacewing



4. Spined Soldier Bug



5. Brown Lacewing



6. Big-Eyed Bug



7. Assassin Bug

Insects**Identification**

Minute Pirate Bug*Orius* spp.**Adult:** Flattened oval-shaped body, black and white contrasting wing patterns, and a triangular-shaped black head, about $\frac{1}{8}$ inch long.**Nymph:** Wingless insect with a teardrop-shaped body, yellow-orange to brown in color, and fast moving, less than $\frac{1}{8}$ inch long. Passes through five instars before reaching adulthood.

Generalist predator. Feeds on aphids, leafhopper nymphs, spider mites, scale insects, insect eggs, small caterpillars, thrips, and whiteflies.

Damsel Bug

Family Nabidae

Adult: Slender insect whose body tapers toward the head, long antenna and beak-like mouthparts, large front legs for grasping prey, varies in color from tan to gray to yellowish to reddish brown; about $\frac{3}{8}$ to $\frac{1}{2}$ inch long.

Generalist predator. Primarily feeds on caterpillars, aphids, leafhoppers, thrips, spider mites, and insect eggs.

Green Lacewing*Chrysopa* and *Chrysoperla* spp.**Adult:** Green, soft-bodied insect with four, clear membranous wings with green veins, long hair-like antennae, and golden eyes; about $\frac{3}{4}$ inch long.**Larva:** Small "alligator-like" insect with a flattened body that tapers at the tail, large mandibles, greenish gray or brownish body color; about $\frac{1}{8}$ to $\frac{3}{4}$ inch long.**Egg:** Oval, laid singly at the end of a long silken stalk, pale green when first laid and later turning gray. Adults may be generalist predators or pollen and honeydew feeders, depending on species.

Larvae are generalist predators. Primarily feeds on aphids, thrips, spider mites, small caterpillars, leafhoppers, mealybugs, psyllids, whiteflies, and insect eggs.

Spined Soldier Bug*Podisus maculiventris* (Say)**Adult:** Shield-shaped insect with a spine on the middle of the front tibia and lateral spurs on the "shoulders," varies in color from yellowish to pale brown with a dark line at the tips of the clear membranous forewings; about $\frac{1}{2}$ inch long.**Nymph:** Round, wingless, young nymphs are red and black in color, while older nymphs are marked with red, black, yellow-orange, and cream bands or patches; about $\frac{1}{8}$ to $\frac{1}{2}$ inch long.

Generalist predator. Primarily feeds on caterpillars, true bug nymphs, and beetle larvae.

Brown Lacewing*Hemerobius* spp.**Adult:** Soft-bodied insect with four, clear membranous wings, light brown bodies, about $\frac{3}{8}$ inch long. Less common and smaller than green lacewings.

Generalist predator. Primarily feeds on mealybugs, psyllids, thrips, mites, whiteflies, aphids, small caterpillars, leafhoppers, and insect eggs.

Big-Eyed Bug*Geocoris* spp.**Adult:** Oval, somewhat flattened with a broad head, large backward-projecting eyes, brownish or yellowish in color, about $\frac{1}{4}$ inch long.

Generalist predator. Primarily feeds on small caterpillars, insect eggs, mites, thrips, whiteflies, flea beetles, and other true bugs.

Assassin Bug

Family Reduviidae

Adult: Medium-sized, slender insect with long legs, an elongated head, long antennae, and large needle-like mouthparts, powerful front legs for grasping prey, varies in body color from blackish to brownish to reddish; about $\frac{1}{2}$ to $1\frac{1}{2}$ inches long.

Generalist predator. Primarily feeds on caterpillars, aphids, leafhoppers, insect eggs, and various small beetles or true bugs.

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